

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously presented) A method of producing a coated substrate comprising the steps of:
 - a) forming a composite, multilayer, free flowing curtain, the curtain having a solids content of at least about 45 weight percent and a first component and a second component capable of reacting with each other, and
 - b) contacting the curtain with a continuous web substrate wherein the continuous web substrate has a web velocity of at least about 600 m/min.
2. (Previously presented) The method of Claim 1, wherein the curtain is a composite, multilayer free flowing curtain, the curtain having at least two layers, whereby one layer comprises the first component which is capable of reacting with the second component in a different layer.
3. (Original) The method of Claim 2, wherein in the multilayer free flowing curtain of step a) at least one internal layer is present between the layer comprising the first component and the layer comprising the second component.
4. (Original) The method of Claim 1, wherein the reaction type of which the first component and the second component of step a) react with each other is selected from the group consisting of anionic-cationic-interaction, crosslinking reaction, free radical reaction, step growth reaction, addition reaction, UV induced curing reaction, electron beam induced curing reaction, acid-base reaction, flocculation/coagulation reaction and combinations thereof.
5. (Cancelled)

6. (Previously presented) The method of Claim 1 wherein at least one layer of the curtain comprises the first component and the second component.
7. (Previously presented) The method of Claim 1, characterized in that in step a) the first component is an amino silane ester and the second component is a glycidyl silane ester.
8. (Cancelled)
9. (Original) The method of Claim 1, wherein the reaction between the first component and the second component of step a) takes place in the free flowing curtain and/or when applied to the substrate and/or when initiated by heat, pressure, radiation, and/or oxygen.
10. (Original) The method of Claim 1, wherein in step a) the first component is a polyvinyl alcohol and the second component is borax.
11. (Original) The method of Claim 1, wherein in step a) the first component is cationic starch and the second component is an anionic coating composition.
12. (Original) The method of Claim 1, wherein the free flowing curtain of step a) comprises a top layer ensuring printability.
13. (Original) The method of Claim 1, wherein the continuous web substrate of step b) has a grammage of from about 20 to about 400 g/m².
14. (Previously presented) The method of Claim 1 wherein at least one of the layers of the multilayer curtain of step a) has a coatweight when dried of less than about 30 g/m².
15. (Previously presented) The method of Claim 1, wherein the multilayer curtain of step a) has a coatweight when dried of less than about 60 g/m².

16. (Previously presented) The method of Claim 1, wherein the multilayer curtain of step a) comprises at least 3 layers.

17. (Previously presented) The method of Claim 1, wherein the multilayer curtain of step a) comprises at least one layer comprising at least one pigment.

18. (Original) The method of Claim 17, wherein the pigment is selected from the group consisting of clay, kaolin, calcined clay, talc, calcium carbonate, titanium dioxide, satin white, synthetic polymer pigment, zinc oxide, barium sulfate, gypsum, silica, alumina trihydrate, mica, and diatomaceous earth.

19. (Previously presented) The method of Claim 1, wherein the curtain of step a) comprises a binder.

20. (Original) The method of Claim 19, wherein the binder is selected from the group consisting of styrene-butadiene latex, styrene-acrylate latex, styrene-acrylate-acrylonitrile latex, styrene-butadiene-acrylate-acrylonitrile latex, styrene-butadiene-acrylate-acrylonitrile latex, styrene-maleic anhydride latex, styrene-acrylate-maleic anhydride latex, polysaccharides, proteins, polyvinyl pyrrolidone, polyvinyl alcohol, polyvinyl acetate, cellulose derivatives and mixtures thereof.

21. (Previously presented) The method of Claim 1, wherein at least one layer of the multilayer free flowing curtain of step a) comprises at least one optical brightening agent.

22. (Previously presented) The method of Claim 1, wherein at least one layer of the multilayer free flowing curtain of step a) comprises at least one surfactant.

23-24. (Cancelled)

25. (Original) The method of Claim 1, wherein the continuous web substrate of step b) is a basepaper or a paperboard.
26. (Original) The method of Claim 1, wherein the continuous web substrate of step b) is neither precoated nor precalendered.
27. (Cancelled)
28. (Withdrawn) A coated substrate obtainable by the method of Claim 1.
29. (Withdrawn) A coated substrate according to claim 28, wherein the coated substrate is coated paper or paperboard.
30. (Currently amended) A process for producing a coated substrate comprising the steps of:
- a) forming a composite, multilayer, free flowing curtain, the curtain having a solids content of at least about 45 weight percent and at least one component capable of reacting with itself or another compound, and
 - b) contacting the curtain with a continuous web substrate in the substantial absence of an applied electrostatic field, wherein the continuous web substrate has a web velocity of at least about 1,000 ~~600~~ m/min, and wherein at least one component of the curtain begins reacting during the coating process and is essentially completely reacted before the coating process is complete.
31. (Previously presented) The method of Claim 30 wherein the curtain has at least one layer comprising at least two components capable of reacting with each other.
32. (Cancelled)
33. (Original) The method of Claim 31, wherein the reaction type of which the first component and the second component of step a) react with each other is selected

from the group consisting of anionic-cationic-interaction, free radical reaction, step growth reaction, addition reaction, UV induced curing reaction, electron beam induced curing reaction, acid-base reaction, flocculation/coagulation reaction and combinations thereof.

34. (Original) The method of Claim 31, wherein the reaction between the first component and the second component of step a) takes place in the free flowing curtain and/or when applied to the substrate and/or when initiated by heat, radiation, and/or oxygen.

35. (Original) The method of Claim 30, wherein the free flowing curtain of step a) comprises a top layer ensuring printability.

36. (Previously presented) The method of Claim 30, wherein at least one of the layers of the multilayer curtain of step a) has a coatweight when dried of less than about 30 g/m².

37. (Previously presented) The method of Claim 30, wherein the multilayer curtain of step a) has a coatweight when dried of less than about 60 g/m².

38. (Previously presented) The method of Claim 30, wherein the multilayer curtain of step a) comprises at least 3 layers.

39. (Previously presented) The method of Claim 30, wherein the multilayer curtain of step a) comprises at least one layer comprising at least one pigment.

40. (Original) The method of Claim 39, wherein the pigment is selected from the group consisting of clay, kaolin, calcined clay, talc, calcium carbonate, titanium dioxide, satin white, synthetic polymer pigment, zinc oxide, barium sulfate, gypsum, silica, alumina trihydrate, mica, and diatomaceous earth.

41. (Previously presented) The method of Claim 30, wherein at least one layer of the multilayer free flowing curtain of step a) comprises a binder.

42. (Original) The method of Claim 41, wherein the binder is selected from the group consisting of styrene-butadiene latex, styrene-acrylate latex, styrene-acrylate-acrylonitrile latex, styrene-butadiene-acrylate-acrylonitrile latex, styrene-maleic anhydride latex, styrene-acrylate-maleic latex, styrene-acrylate-maleic anhydride latex, polysaccharides, proteins, polyvinyl pyrrolidone, polyvinyl alcohol, polyvinyl acetate, cellulose derivatives and mixtures thereof.

43. (Previously presented) The method of Claim 30, wherein at least one layer of the multilayer free flowing curtain of step a) comprises at least one optical brightening agent.

44. (Previously presented) The method of Claim 30, wherein at least one layer of the multilayer free flowing curtain of step a) comprises at least one surfactant.

45-46. (Cancelled)

47. (Original) The method of Claim 30, wherein the continuous web substrate of step b) is a basepaper or a paperboard.

48. (Original) The method of Claim 30, wherein the continuous web substrate of step b) is neither precoated nor precalendered.

49. (Cancelled)

50. (Original) The method of Claim 30, wherein the continuous web substrate of step b) has a grammage of from about 20 to about 400 g/m².

51. (Withdrawn) A coated substrate obtainable by the method of Claim 30.

52. (Withdrawn) A coated substrate according to Claim 30, wherein the coated substrate is coated paper or paperboard.

53. (Original) The method of Claim 30, wherein the curtain contains one reactive component, and wherein the reaction of the reactive component is initiated by an initiating means external to the curtain selected from the group consisting of heat, radiation, pressure, or a combination thereof.

54. (Previously presented) The method of Claim 1, wherein the multilayer curtain of step a) comprises at least 4 layers.

55. (Previously presented) The method of Claim 1, wherein the multilayer curtain of step a) comprises at least 5 layers.

56. (Previously presented) The method of Claim 1, wherein the multilayer curtain of step a) comprises at least 6 layers.

57-58. (Cancelled)

59. (Previously presented) The method of Claim 30, wherein the multilayer curtain of step a) comprises at least 4 layers.

60. (Previously presented) The method of Claim 30, wherein the multilayer curtain of step a) comprises at least 5 layers.

61. (Previously presented) The method of Claim 30, wherein the multilayer curtain of step a) comprises at least 6 layers.

62-63. (Cancelled)

64. (Original) The method of Claim 1, wherein the curtain is formed with a slot die.

65. (Original) The method of Claim 1, wherein the curtain is formed with a slide die.
66. (Original) The method of Claim 1, wherein at least one layer of the curtain comprises polyethylene oxide.
67. (Original) The method of Claim 1, wherein the curtain comprises polyethylene oxide in the interface layer.
68. (Original) The method of Claim 30, wherein the curtain is formed with a slot die.
69. (Original) The method of Claim 30, wherein the curtain is formed with a slide die.
70. (Original) The method of Claim 30, wherein at least one layer of the curtain comprises polyethylene oxide.
71. (Original) The method of Claim 30, wherein the curtain comprises polyethylene oxide in the interface layer.
72. (Previously presented) The method of Claim 1, characterized in that in step a) the first component is a starch and the second component is a dialdehyde.
73. (Previously presented) The method of Claim 1, characterized in that in step a) the first component is an epoxy-functional polymer and the second component is an amine hardening agent.
74. (Previously presented) The method of Claim 1, characterized in that in step a) the first component is a polyol and the second component is a polyisocyanate.

75. (Previously presented) The method of Claim 1 wherein the web velocity is at least about 800 m/min.

76. (Previously presented) The method of Claim 1 wherein the web velocity is at least about 1,000 m/min.

77. (Previously presented) The method of Claim 1 wherein the web velocity is at least about 1,500 m/min.

78. (Previously presented) The method of Claim 1 wherein the web velocity is from about 600 m/min to about 3,200 m/min.

79. (Previously presented) The method of Claim 1 wherein the web velocity is from about 800 m/min to about 1,500 m/min.

80. (Previously presented) A method of producing a coated paper or paperboard comprising the steps of:

- a) forming a free flowing, multilayer curtain, the curtain having a first component and a second component capable of reacting with each other, wherein the curtain further comprises polyethylene oxide in the interface layer, and
 - b) contacting the curtain with a continuous web substrate wherein the continuous web substrate has a web velocity of at least about 1,000 m/min.;
- wherein the curtain has a solids content of at least about 45 weight percent.

81. (New) The method of Claim 80 wherein step b) is conducted in the substantial absence of an applied electrostatic field at a line where the curtain contacts the substrate.

82. (New) A method of producing a coated paper or paperboard, excluding photographic paper and pressure sensitive copying paper, comprising the following steps:

a) forming a free flowing, multilayer curtain by passing a plurality of layer-forming compositions through a curtain coating head, wherein at least one layer of the curtain comprises a first component and a second component capable of reacting with each other, and wherein the first and second components are mixed when, or before, the components pass through the curtain coating head, and

b) contacting the curtain with a continuous web substrate in the substantial absence of an applied electrostatic field wherein the continuous web substrate has a web velocity of at least about 1,000 m/min.;

wherein the curtain has a solids content of at least about 45 weight percent.

83. (New) The method of Claim 82 wherein the process is conducted under conditions such that the first and second components at least partially react with each other during the coating application process.

84. (New) The method of Claim 82 wherein the first and second components pass through an inline mixer prior to passing through the curtain coating head.